



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangerter
Governor

Dee C. Hansen
Executive Director

Dianne R. Nielson, Ph.D.
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

September 30, 1992

Mr. David I. Hodson, General Manager
Barney's Canyon Mine
Kennecott Corporation
8200 South 9600 West
P.O. Box 311
Bingham Canyon, Utah 84006-0311

Dear Mr. Hodson:

Re: Response to Kennecott September, 1992 Letter, Permit Revision, Kennecott Corporation, Barney's Canyon Mine, M/035/009, Salt Lake County, Utah

This letter is provided in response to our receipt of your September 22, 1992 letter, wherein you responded to the conditions of our September 8, 1992 Tentative Approval letter. The Division finds Kennecott's response to the conditions satisfactory, except for the following portions:

R647-004-110 Reclamation Plan

110.2 Roads, highwalls, slopes, etc.

1. The language that Kennecott has submitted for this section is, for the most part, acceptable. However, the Division would like to have further clarification concerning the reclamation of the 7300 and 7200 dumps, and the standard to be set for this reclamation. These dump slopes are to be reclaimed at the angle of repose with a reduced revegetation standard. This standard must be established by Dec. 31, 1992. The reduced standard will be established by using the methodology described in your Sept. 22, 1992 letter, evaluation of surrounding undisturbed vegetation (of similar elevation and aspect), and by utilizing whatever information the current literature may provide. This standard will be developed jointly between the Division and Kennecott staff. Depending on the success of the 7300 dump slope reclamation, this standard may be subject to change.

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Kennecott may elect to push the 7200 dump out to a 2:1 slope, if it is felt that adequate reclamation will not be achieved at the angle of repose. If Kennecott elects to push the 7200 dump out to a 2:1 slope, the established reduced standard will still apply.

The operator has indicated the willingness to work jointly with the Division in modifying/enhancing the revegetation program on the angle of repose slopes (dumps and haul roads). A first step in this direction will be to revise the seed mixture in the plan, which addresses areas that will not receive topsoil. The seed mixture on page 39 of the revision, Table 5.4-1, should be changed to the following:

<u>Common Name</u>	<u>Scientific Name</u>	<u>lbs/acre(PLS)</u>
Grasses:		
bluebunch wheatgrass	Agropyron spicatum	3
tall wheatgrass	Agropyron elongatum	3
indian ricegrass	Oryzopsis hymenoides	2
squirreltail	Sitanion hystrix	2
sheep fescue	Festuca ovina	3
Forbs:		
yellow sweetclover	Melilotus officinalis	3
palmer penstemon	Penstemon palmeri	3
alfileria	Erodium cicutarium	2
Shrubs:		
rubber rabbitbrush	Chrysothamnus nauseosus	2
forage kochia	Kochia prostrata	2
curl-leaf mahogany	Cercocarpus ledifolius	2

Total seeding rate = 27

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Plantings:

gambel oak	Quercus gambelii	45/acre
snowberry	Symphoricarpus albus	45/acre
rabbitbrush	Chrysothamnus nauseosus	45/acre

The seed application will remain the same as that described in the original NOI on page 120, 3rd paragraph. The operator may elect to change this seed mixture, or the application methodology, with the Division's approval, if early seeding efforts prove unsuccessful using this mix.

The Division asks that the operator commit to providing a special section in the annual report which discusses revegetation efforts taken on these steep slopes during the course of the year. The information will include an evaluation of planted areas describing surviving species, cover values, and slope stabilization techniques utilized. The reclamation methodology will be scrutinized on these steep slope areas and will be used to determine whether this type of reclamation can be used, in similar situations, in the future. Results of each years evaluation will be used to determine if supplemental reseeding will be necessary on areas showing poor success.

The success or failure of the reclamation/revegetation efforts performed on these steep-sloped dumps and haul roads will help establish a precedent, which will assist the Division in making future reclamation decisions regarding angle of repose slopes.

R647-004-112 Variance


4. A specific numerical revegetation standard for the reclamation of the haul road cut and fill slopes will be set. The standard will be developed between the Division and Kennecott no later than December 31, 1992.

A written commitment/concurrence by Kennecott Corporation to these remaining issues, and incorporating the appropriate language into the final permit revision document and the revised Mining and Reclamation Plan for the Barney's Canyon Mine, will enable the Division to grant its final approval of this permit

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revision. Thank you for your assistance and cooperation in completing this permitting action. Please contact me or D. Wayne Hedberg should you have questions regarding the content of this letter.

Sincerely


for Lowell P. Braxton
Associate Director, Mining

jb
cc: Dianne Nielson, DOGM
Minerals staff (route)
M035009.HWS